

**ABSTRACT OF THE DISCLOSURE**

A transformer for substantially matching the impedance of a generator and a load, which is coupled to the generator via a transmission line. The transformer comprises an outer conductor having an inner surface and an inner conductor having an outer surface that is positioned within the outer conductor. The transformer further includes a plurality of transformation sections, where each section provides a particular separation distance between the inner surface of the outer conductor and the outer surface of the inner conductor to yield a particular characteristic impedance for each of the plurality of transformation sections, thereby substantially matching the impedance of the generator to the load.